

Response Under 37 CFR 1.116
Expedited Procedure
Examining Group 1775
Appl. No. 10/069,625
Amdt. dated February 10, 2004
Reply to Office Action of December 10, 2003
Attorney Docket No. 1217-012195

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (Currently Amended): A personal ornament having a white coating layer comprising:

a base article of the personal ornament made of a tungsten carbide and tantalum carbide, and

a white-colored stainless steel coating layer formed by a dry plating process on at least a part of the surface of the base article.

Claim 2 (Currently Amended): A personal ornament having a white coating layer comprising:

a base article of the personal ornament made of a nonferrous metal,

an underlying plating layer formed on the surface of the base article, and

a white-colored stainless steel coating layer formed by a dry plating process on at least a part of the surface of the underlying plating layer.

Claim 3 (Currently Amended): The personal ornament having a white coating layer according to claim 1, wherein a white-colored noble metal coating layer is formed in a thickness ranging from 0.04 to 0.3 μ m by a dry plating process on the surface of the stainless steel coating layer.

Claim 4 (Cancelled)

Response Under 37 CFR 1.116
Expedited Procedure
Examining Group 1775
Appl. No. 10/069,625
Amdt. dated February 10, 2004
Reply to Office Action of December 10, 2003
Attorney Docket No. 1217-012195

Claim 5 (Original): The personal ornament having a white coating layer according to claim 2, wherein the base article of the personal ornament is made of a nonferrous metal selected from the group consisting of copper, copper alloys, aluminum, aluminum alloys, zinc, zinc alloys, magnesium, and magnesium alloys.

Claim 6 (Original): The personal ornament having a white coating layer according to claim 2, wherein the underlying plating layer has a multilayer structure constituted of at least one plating layer formed by a wet plating process and at least one plating layer formed by a dry plating process.

Claim 7 (Previously Presented): The personal ornament having a white coating layer according to claim 2, wherein the underlying plating layer comprises a coating layer which is formed by a wet plating process and is composed of at least one metal selected from the group consisting of gold, copper, nickel, chromium, tin, palladium, nickel-phosphorus alloys, nickel alloys excluding nickel-phosphorus alloys, copper-tin-palladium alloys, copper alloys excluding copper-tin-palladium alloys, tin alloys excluding copper-tin-palladium alloys, and palladium alloys excluding copper-tin-palladium alloys.

Claim 8 (Previously Presented): The personal ornament having a white coating layer according to claim 7, wherein the underlying plating layer includes the nickel-phosphorus alloy plating layer as the underlying plating layer which is a hard coating layer having been treated for age hardening.

Claim 9 (Previously Presented): The personal ornament having a white coating layer according to claim 2, wherein the underlying plating layer is a coating layer formed by a wet

Response Under 37 CFR 1.116
Expedited Procedure
Examining Group 1775
Appl. No. 10/069,625
Amdt. dated February 10, 2004
Reply to Office Action of December 10, 2003
Attorney Docket No. 1217-012195

plating process and composed of at least one nickel-free metal selected from the group consisting of gold, copper, chromium, tin, palladium, copper-tin-palladium alloys, copper alloys excluding copper-tin-palladium alloys, tin alloys excluding copper-tin-palladium alloys, and palladium alloys excluding copper-tin-palladium alloys.

Claim 10 (Previously Presented): The personal ornament having a white coating layer according to claim 2, wherein the underlying plating layer is a coating layer formed by a dry plating process and is composed of titanium carbide, zirconium carbide, or tantalum carbide.

Claim 11 (Previously Presented): The personal ornament having a white coating layer according to claim 2, wherein the underlying plating layer has an entire thickness ranging from 0.2 to 30 μm .

Claim 12 (Currently Amended): The personal ornament having a white coating layer according to claim 1, wherein the white-colored stainless steel coating layer is composed of an austenitic stainless steel having a composition of 0.01-0.12 vol% of carbon, 0.1-1.0 vol% of silicon, 1.0-2.5 vol% of manganese, 8-22 vol% of nickel, and 15-26 vol% of chromium.

Claim 13 (Currently Amended): The personal ornament having a white coating layer according to claim 1, wherein the white-colored stainless steel coating layer is composed of a nickel-free ferritic stainless steel having a composition of 0.01-0.12 vol% of carbon, 0.1-1.0 vol% of silicon, 1.0-2.5 vol% of manganese, 14-20 vol% of chromium, and 0.4-2.5 vol% of molybdenum.

Claim 14 (Currently Amended): The personal ornament having a white coating layer according to claim 1, wherein the white-colored stainless steel coating layer is formed by

Response Under 37 CFR 1.116
Expedited Procedure
Examining Group 1775
Appl. No. 10/069,625
Amdt. dated February 10, 2004
Reply to Office Action of December 10, 2003
Attorney Docket No. 1217-012195

a dry plating process selected from a sputtering method, an arc evaporation method, or an ion-plating method.

Claim 15 (Previously Presented): The personal ornament having a white coating layer according to claim 1, wherein the stainless steel coating layer has a thickness ranging from 0.1 to 2.0 μm .

Claim 16 (Currently Amended): The personal ornament having a white coating layer according to claim 1, wherein at least one plating layer different in color tone from the white-colored stainless steel coating layer is formed by a dry plating process on ~~a part of~~ the stainless steel coating layer formed by a dry plating process.

Claim 17 (Original): The personal ornament having a white coating layer according to claim 16, wherein the plating layer different from the stainless steel coating layer is at least one coating layer composed of gold, gold alloys, titanium nitride, and zirconium nitride.

Claim 18 (Currently Amended): The personal ornament having a white coating layer according to claim 3, wherein the white-colored noble metal coating layer is a coating layer formed by a dry plating process and composed of a noble metal selected from the group consisting of palladium, platinum, rhodium, gold alloys, silver, and silver alloys.

Claim 19 (Currently Amended): A process for producing a personal ornament having a white coating layer comprising the steps of:

forming a base article of the personal ornament by machining a metal;

washing and degreasing the surface of the base article;

Response Under 37 CFR 1.116
Expedited Procedure
Examining Group 1775
Appl. No. 10/069,625
Amdt. dated February 10, 2004
Reply to Office Action of December 10, 2003
Attorney Docket No. 1217-012195

setting the base article in a dry plating apparatus selected from sputtering systems, arc evaporation systems, and ion-plating systems, and cleaning the base article by bombard cleaning in an argon gas atmosphere; and

forming a white-colored stainless steel coating layer by a dry plating process on the surface of the base article.

Claim 20 (Currently Amended): A process for producing a personal ornament having a white coating layer comprising the steps of:

forming a base article of the personal ornament from a nonferrous metal by machining;

washing and degreasing the surface of the base article;

forming on the surface of the base article an underlying plating layer by a wet plating process or a dry plating process;

setting the base article having the underlying plating layer in a dry plating apparatus selected from sputtering systems, arc evaporation systems, and ion-plating systems, and cleaning the surface of the underlying plating layer by bombard cleaning in an argon gas atmosphere; and

forming a white-colored stainless steel coating layer by a dry plating process on the surface of the underlying plating layer.

Claim 21 (Currently Amended): The process for producing a personal ornament having a white coating layer according to claim 19, which further comprises, after the formation of the white-colored stainless steel coating layer, the step of forming a white-colored noble metal

Response Under 37 CFR 1.116
Expedited Procedure
Examining Group 1775
Appl. No. 10/069,625
Amdt. dated February 10, 2004
Reply to Office Action of December 10, 2003
Attorney Docket No. 1217-012195

coating layer in a thickness ranging from 0.04 to 0.3 μ m by a dry plating process on the surface of the stainless steel coating layer.

Claim 22 (Original): The process for producing a personal ornament having a white coating layer according to claim 19, wherein the metal employed for forming the base article of the personal ornament is tungsten carbide or tantalum carbide.

Claim 23 (Original): The process for producing a personal ornament having a white coating layer according to claim 20, wherein the nonferrous metal employed for forming the base article of the personal ornament is at least one nonferrous metal selected from the group consisting of copper, copper alloys, aluminum, aluminum alloys, zinc, zinc alloys, magnesium and magnesium alloys.

Claim 24 (Original): The process for producing a personal ornament having a white coating layer according to claim 20, wherein the underlying plating layer has a multilayer structure constituted of at least one plating layer formed by a wet plating process on the surface of the base article and at least one different plating layer formed thereon by a dry plating process.

Claim 25 (Previously Presented): The process for producing a personal ornament having a white coating layer according to claim 20, wherein the underlying plating layer is formed by a wet plating process from at least one metal selected from the group consisting of gold, copper, nickel, chromium, tin, palladium, nickel-phosphorus alloys, nickel alloys excluding nickel-phosphorus alloys, copper-tin-palladium alloys, copper alloys excluding copper-tin-palladium alloys, tin alloys excluding copper-tin-palladium alloys, and palladium alloys excluding copper-tin-palladium alloys.

Response Under 37 CFR 1.116
Expedited Procedure
Examining Group 1775
Appl. No. 10/069,625
Amdt. dated February 10, 2004
Reply to Office Action of December 10, 2003
Attorney Docket No. 1217-012195

Claim 26 (Previously Presented): The process for producing a personal ornament having a white coating layer according to claim 25, wherein the underlying plating layer includes the nickel-phosphorus alloy plating layer which is treated for age hardening at 200 to 450°C for 20 to 60 minutes to harden the nickel-phosphorus alloy plating layer.

Claim 27 (Previously Presented): The process for producing a personal ornament having a white coating layer according to claim 20, wherein the underlying plating layer is formed by a wet plating process from at least one nickel-free metal selected from the group consisting of gold, copper, chromium, tin, palladium, copper-tin-palladium alloys, copper alloys excluding copper-tin-palladium alloys, tin alloys excluding copper-tin-palladium alloys, and palladium alloys excluding copper-tin-palladium alloys.

Claim 28 (Previously Presented): The process for producing a personal ornament having a white coating layer according to claim 20, wherein the underlying plating layer is formed from titanium carbide, zirconium carbide or tantalum carbide by a dry plating process.

Claim 29 (Previously Presented): The process for producing a personal ornament having a white coating layer according to claim 20, wherein the underlying plating layer has an entire thickness of ranging from 0.2 to 30µm.

Claim 30 (Currently Amended): The process for producing a personal ornament having a white coating layer according to claim 19, wherein the white-colored stainless steel coating layer is composed of an austenitic stainless steel having a composition of 0.01-0.12 vol% of carbon, 0.1-1.0 vol% of silicon, 1.0-2.5 vol% of manganese, 8-22 vol% of nickel and 15-26

Response Under 37 CFR 1.116
Expedited Procedure
Examining Group 1775
Appl. No. 10/069,625
Amdt. dated February 10, 2004
Reply to Office Action of December 10, 2003
Attorney Docket No. 1217-012195

vol% of chromium; and is formed by a sputtering method, an arc evaporation method or an ion plating method.

Claim 31 (Currently Amended): The process for producing a personal ornament having a white coating layer according to claim 19, wherein the white-colored stainless steel coating layer is composed of a nickel-free ferritic stainless steel having a composition of 0.01-0.12 vol% of carbon, 0.1-1.0 vol% of silicon, 1.0-2.5 vol% of manganese, 14-20 vol% of chromium, and 0.4-2.5 vol% of molybdenum; and is formed by a sputtering method, an arc evaporation method, or an ion plating method.

Claim 32 (Currently Amended): The process for producing a personal ornament having a white coating layer according to claim 19, which further comprises,

after the step of forming a white-colored stainless steel coating layer on the surface of the base article,

at least once the steps of:

masking a part of the stainless steel coating layer,

forming a plating layer different in color tone from the stainless steel coating layer on the surface of the stainless steel coating layer and the surface of the mask by a dry plating process, and

removing the mask and the coating layer on the mask,

to thereby provide an outermost plating layer having a white-colored stainless steel coating layer portion and at least one plating layer portion different in color tone from the stainless steel coating layer.

Response Under 37 CFR 1.116
Expedited Procedure
Examining Group 1775
Appl. No. 10/069,625
Amdt. dated February 10, 2004
Reply to Office Action of December 10, 2003
Attorney Docket No. 1217-012195

Claim 33 (Original): The process for producing a personal ornament having a white coating layer according to claim 32, wherein the plating layer different in color tone from the stainless steel coating layer is at least one coating layer formed from a metal selected from the group consisting of gold, gold alloys, titanium nitride, hafnium nitride and zirconium nitride by a dry plating process selected from sputtering methods, arc evaporation methods, and ion plating methods.

Claim 34 (Currently Amended): The process for producing a personal ornament having a white coating layer according to claim 21, wherein the white-colored noble metal coating layer is a coating layer formed by a dry plating process from a noble metal selected from the group consisting of palladium, platinum, rhodium, gold alloys, silver and silver alloys.

Claim 35 (Currently Amended): The personal ornament having a white coating layer according to claim 2, wherein a white-colored noble metal coating layer is formed in a thickness ranging from 0.04 to 0.3 μ m by a dry plating process on the surface of the stainless steel coating layer.

Claim 36 (Previously Presented): The personal ornament having a white coating layer according to claim 6, wherein the underlying plating layer comprises a coating layer which is formed by a wet plating process and is composed of at least one metal selected from the group consisting of gold, copper, nickel, chromium, tin, palladium, nickel-phosphorus alloys, nickel alloys excluding nickel-phosphorus alloys, copper-tin-palladium alloys, copper alloys excluding copper-tin-palladium alloys, tin alloys excluding copper-tin-palladium alloys, and palladium alloys excluding copper-tin-palladium alloys.

Response Under 37 CFR 1.116
Expedited Procedure
Examining Group 1775
Appl. No. 10/069,625
Amdt. dated February 10, 2004
Reply to Office Action of December 10, 2003
Attorney Docket No. 1217-012195

Claim 37 (Previously Presented): The personal ornament having a white coating layer according to claim 6, wherein the underlying plating layer is a coating layer formed by a wet plating process and composed of at least one nickel-free metal selected from the group consisting of gold, copper, chromium, tin, palladium, copper-tin-palladium alloys, copper alloys excluding copper-tin-palladium alloys, tin alloys excluding copper-tin-palladium alloys, and palladium alloys excluding copper-tin-palladium alloys.

Claim 38 (Previously Presented): The personal ornament having a white coating layer according to claim 6, wherein the underlying plating layer is a coating layer formed by a dry plating process and is composed of titanium carbide, zirconium carbide, or tantalum carbide.

Claim 39 (Currently Amended): The personal ornament having a white surface coating layer according to claim 2, wherein the white-colored stainless steel coating layer is composed of an austenitic stainless steel having a composition of 0.01-0.12 vol% of carbon, 0.1-1.0 vol% of silicon, 1.0-2.5 vol% of manganese, 8-22 vol% of nickel, and 15-26 vol% of chromium.

Claim 40 (Currently Amended): The personal ornament having a white coating layer according to claim 2, wherein the white-colored stainless steel coating layer is composed of a nickel-free ferritic stainless steel having a composition of 0.01-0.12 vol% of carbon, 0.1-1.0 vol% of silicon, 1.0-2.5 vol% of manganese, 14-20 vol% of chromium, and 0.4-2.5 vol% of molybdenum.

Claim 41 (Currently Amended): The process for producing a personal ornament having a white coating layer according to claim 20, which further comprises, after the formation

Response Under 37 CFR 1.116
Expedited Procedure
Examining Group 1775
Appl. No. 10/069,625
Amdt. dated February 10, 2004
Reply to Office Action of December 10, 2003
Attorney Docket No. 1217-012195

of the white-colored stainless steel coating layer, the step of forming a white-colored noble metal coating layer in a thickness ranging from 0.04 to 0.3 μ m by a dry plating process on the surface of the stainless steel coating layer.

Claim 42 (Previously Presented): The process for producing a personal ornament having a white coating layer according to claim 24, wherein at least one plating layer of multilayer structure of the underlying plating layer is formed by a wet plating process from at least one metal selected from the group consisting of gold, copper, nickel, chromium, tin, palladium, nickel-phosphorus alloys, nickel alloys excluding nickel-phosphorus alloys, copper-tin-palladium alloys, copper alloys excluding copper-tin-palladium alloys, tin alloys excluding copper-tin-palladium alloys, and palladium alloys excluding copper-tin-palladium alloys.

Claim 43 (Previously Presented): The process for producing a personal ornament having a white coating layer according to claim 24, wherein at least one plating layer of multilayer structure of the underlying plating layer is formed by a wet plating process from at least one nickel-free metal selected from the group consisting of gold, copper, chromium, tin, palladium, copper-tin-palladium alloys, copper alloys excluding copper-tin-palladium alloys, tin alloys excluding copper-tin-palladium alloys, and palladium alloys excluding copper-tin-palladium alloys.

Claim 44 (Previously Presented): The process for producing a personal ornament having a white coating layer according to claim 24, wherein at least one plating layer of multilayer structure of the underlying plating layer is formed from titanium carbide, zirconium carbide or tantalum carbide by a dry plating process.

Response Under 37 CFR 1.116
Expedited Procedure
Examining Group 1775
Appl. No. 10/069,625
Amdt. dated February 10, 2004
Reply to Office Action of December 10, 2003
Attorney Docket No. 1217-012195

Claim 45 (Currently Amended): The process for producing a personal ornament having a white coating layer according to claim 20, which further comprises,

after the step of forming a white-colored stainless steel coating layer on the surface of the underlying coating layer,

at least once the steps of:

masking a part of the stainless steel coating layer,

forming a plating layer different in color tone from the stainless steel coating layer on the surface of the stainless steel coating layer and the surface of the mask by a dry plating process, and

removing the mask and the coating layer on the mask,

to thereby provide an outermost plating layer having a white-colored stainless steel coating layer portion and at least one plating layer portion different in color tone from the stainless steel coating layer.